

County Borough of Blackburn



EDUCATION COMMITTEE

ANNUAL REPORT

OF THE

SCHOOL MEDICAL OFFICER

for the year 1923.

BY

W. ALLEN DALEY,

M.D. B.S. B.Sc.(Lond.) D.P.H.(Cambridge), B.A.
Medical Officer of Health and School Medical Officer.

BLACKBURN:

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W. ALLEN DALEY, M.D., B.S., B.Sc. (Lond.), B.A. (R.U.I.),
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Assistant School Medical Officers:

JAMES ROBERTSON, M.B., C.M. (Glasgow), D.P.H. (Royal Colleges of Physicians and Surgeons, Edinburgh and Glasgow). (Resigned June, 1923.)

LYDIA M. HENRY, M.D. (Sheffield). (Resigned September, 1923.)

WILLIAM M. FRAZER, M.B., Ch.B., M.Sc., D.P.H. (Liverpool), Barrister-at-Law. (From August, 1923.)

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School Dentists:

MARION S. MACKINNON, L.D.S. (Glasgow). (Resigned May, 1923.)

ELLINA J. B. THOMSON, L.D.S. (Glasgow). (From August, 1923.)

Ophthalmic Surgeon (part time):

J. M. WISHART, F.R.C.S. (Edin.), M.B., Ch.B. (Edin.).

School Nurses:

E. BARTON, S. N. HODGSON, T. BROTHERS, A. GARSTANG.

In Charge of Swedish Remedial Exercises Clinic:

IDA HOLMES,

School Clinics.

NAME.	PURPOSE.	WHERE HELD.	TIMES.
Inspection Clinic.	Special Examination of Cases Referred by Teachers, School Attendance Officers and School Nurses.	Health Department, Town Hall.	Tuesdays, 2 p.m.; Saturdays, 9-30 a.m.
Ophthalmic Clinic.	Prescription of Spectacles.	* „	Mondays, 1-30 p.m. Thursdays, 9-30 a.m.
Dental Clinic.	Dental Treatment.	„	Every week-day (by appointment).
Minor Ailments Clinic.	Treatment of Minor Diseases of Skin, etc.	* „	Every week-day, at 8-45 a.m.
"	"	119, Bolton Road.	Mondays to Fridays at 3-45 p.m.; Saturdays, 9-0 a.m.
Cleansing Station.	Treatment of Scabies and Cleansing Verminous Cases.	Throstle Street.	Arranged as required.
Throat Clinic.	Operative Treatment of Adenoids and Enlarged Tonsils (Out-Patients).	Blackburn & East Lancs. Saturday mornings as R. Infirmary.	required.
"	, (In-Patients).	Queen's Pk. Hospital.	Arranged as required.
Remedial Exercises.	Treatment of Deformities.	Health Department.	Mondays and Thursdays, 2 p.m.; other times by appointment.

*Removed in April, 1924, to 68, Victoria Street.

PUBLIC HEALTH DEPARTMENT,

TOWN HALL,

BLACKBURN,

February, 1924.

*To the Chairman and Members of the Education Committee
of the County Borough of Blackburn.*

LADIES AND GENTLEMEN,

I have the honour to present herewith my Fourth Annual Report, being the 20th of the series, on the Medical Inspection and Treatment of School Children.

The statistics in this Report have been prepared by Mr. Fowler (Chief Clerk), and Mr. Pemberton, and much of the letter-press has been written by Dr. Frazer, for whose valuable co-operation I am much indebted.

It is obvious that the success of the Department depends almost entirely on the efficiency and skill of each of its members, and I have much pleasure in expressing my thanks to them.

The most important developments during the year have been :

1. Establishment of a Residential Open-Air School for delicate children at the Corporation Hospital (Page 55).
2. Improvement of the arrangements for dealing with cripples by the appointment of an Orthopædic Surgeon, and by provision for the aftercare of crippled children operated upon at the Queen's Park Hospital (Page 51).
3. Provision of means by which cases of adenoids and enlarged tonsils requiring operative treatment can, if the parents so

desire, be admitted to the Queen's Park Hospital and remain there for 48 hours after the operation (Page 38).

4. Improvement in the sanitary condition of many of the schools (Page 12).

5. Extension of Health Education amongst the scholars (Page 65).

It is my pleasant duty to acknowledge again my indebtedness to the Director of Education and various members of his staff for the advice and assistance I have received from them, and for the very large amount of information which they have so willingly supplied for inclusion in this Report.

In conclusion I beg to thank most warmly the Chairman and Members of the School Attendance Reference Sub-Committee for their unfailing support.

I am, Ladies and Gentlemen,

Your obedient Servant,

W. ALLEN DALEY,

School Medical Officer.

COUNTY BOROUGH OF BLACKBURN.

Table 1.

NUMBER OF SCHOOLS AND CHILDREN.

There are 14 Council and 32 Non-Provided Schools in the town; the following table gives particulars of the attendances during 1923:—

	No. of Schools	No. on Rolls	*Average Attendance	*Percentage of Average Attendance
Church of England	25 ...	8807 ...	7742 ...	87.9
British School	1 ...	411 ...	357 ...	86.6
Roman Catholic	6 ...	3593 ...	3203 ...	89.1
Council Schools	14 ...	5153 ...	4549 ...	88.2
—	—	—	—	—
Totals	46	17964	15851	88.2
Boys' Schools	3001	...	2785	92.7
Girls' Schools	2982	...	2728	91.4
Mixed Schools	6653	...	6115	91.8
Infants Over Five	3917	...	4223	79.2
Infants Under Five	1411	...	—	—
—	—	—	—	—
Totals	17964	...	15851	88.2
Figures for 1922	18250	...	16039	87.8
,, 1921	18617	...	16112	86.5

* Excluding Children under five years of age.

The decrease in the number on the school rolls is accounted for by the lowness of the birth-rate during the war. In 1918 it reached its lowest point, 12.4 per 1,000 of the population, and the number of entrants should begin to increase during 1924, as the birth-rate was 14.0 in 1919 and 22.1 in 1920. It is gratifying that the percentage attendance is increasing steadily.

The High School, including Crosshill Preparatory School, has 399 scholars, and the Queen Elizabeth Grammar School, 511.

COST.—I am indebted to the Borough Treasurer for the following :—

“ The rateable value of the Borough in 1922-23 was £727,143. The gross cost of medical inspection and treatment in both elementary and secondary schools for the twelve months ended March 31st, 1923, was £3,221 compared with £3,999 in the preceding year. The Government grant was half this expenditure, hence the net cost to the rates was £1,611.”

The cost of the School Medical Service for 1922-23 per child on the school rolls was 3/4 gross and 1/8 net, and the cost as a decimal part of a penny rate was 1.07 gross and 0.53 net, the corresponding figure for 1921-22 being 4s. 2d. gross and 2/1 net per child on the school rolls and 1.36 penny gross and 0.68 penny net on the rates.

In a recent publication by the Board of Education particulars are given of the cost in each town of the special services, which include medical inspection and treatment of school children, provision of meals, special schools for defective children, organisation of physical training, evening play centres, and nursery schools. The following table compares the Blackburn figures with the average in the County Boroughs :—

COST OF SPECIAL SERVICES PER CHILD.

	Black- burn.	Aver. of all County Boro's.
1921-22	11/2	16/4
1922-23	9/5	12/8
1923-24 (Estimated)	9/2	13/2

In many towns the expenditure on special schools is much greater than in Blackburn.

ADMINISTRATION.

STAFF. There were important changes in the staff during 1923, and as it was impracticable for the newly appointed Officers to take over their duties until some time after their predecessors had left, it was only with great difficulty that the routine inspections were completed. Dr. Robertson resigned in June on his appointment as Medical Officer of Health, Darwen, and Dr. Henry left in September, having obtained the post of Dean of

King's College for Women, London. Dr. Frazer and Dr. Ella Mackenzie were appointed to the vacancies thus created in August and October respectively. Miss Mackinnon, the School Dentist, was appointed to a similar post in Reading in May. Her duties were carried out by a locum tenens, Miss Agnes C. Glen, until Miss Ellina J. B. Thomson was appointed in August. Miss Dwyer, School Nurse, resigned in April, and was succeeded by Miss Garstang.

The clinic work is growing so rapidly that the existing staff of nurses is proving inadequate. The attendances at the Minor Ailments Clinics have grown from 1,012 in 1920 to 11,264 in 1923. The dental clinic was not established till 1921, when the attendances were 1,658; in 1923 they were 3,886. The work at the Remedial Exercises Clinic is hampered by lack of a trained staff. Future needs will be the provision of a dental attendant who will assist the School Dentist and so relieve a School Nurse for other duties, and a Nurse specially trained in work amongst cripples whose special care will be the home visiting of cripples to ensure that the Orthopaedic Surgeon's instructions are carried out properly.

PREMISES. The inadequacy of the accommodation provided at the Town Hall for the ophthalmic and minor ailments clinics is increasingly apparent. The average attendances at the clinics were: Ophthalmic 10, minor ailments 29. The maximum number present at a clinic was: Ophthalmic 47, minor ailments 57. Most of the children who attend the ophthalmic clinic are accompanied by a parent, and as they have to wait until the drops, put into the eye to dilate the pupil, have had time to act, the usual length of time they remain at the clinic is three hours. An adequate waiting-room should be provided, as the corridor used at present is obviously unsuitable for this purpose. Fortunately the Committee have been able to secure premises owned by the Corporation at 68, Victoria Street, and they will be taken over for these two clinics early in 1924.

SANITARY CONDITION OF THE SCHOOLS. The sanitary survey has been interfered with seriously by the changes in the staff preventing the release of an Assistant Medical Officer for this work, but with the normal staff now available considerable progress should be made during 1924.

The drains and sanitary conveniences of every school were examined by the Health Committee's Drainage Inspector. The surveys of St. Paul's, Griffin, and St. Andrew's Schools were completed, and an effort was made to have carried out the alterations found to be necessary in the thirteen schools surveyed in 1922. Speaking generally, the Managers attend readily to small matters, but where, as in Christ Church Schools, the requirements involve considerable expenditure, a long delay occurs before the unsatisfactory conditions are rectified. The sanitary conveniences at Christ Church School have not yet been removed to a suitable situation, but a parochial effort to raise the necessary money has been held, and no doubt the work will soon be put in hand. Internal painting was done at twelve schools.

Repairs to the outside structures, for example roofs, rain-water pipes, flushing cisterns, and yard surfaces, replacements such as drain and gully traps, or improvements such as abolition of a fixed ashpit and provision of dust bins, were effected in the undermentioned schools :—

Accrington Road, Audley Range, All Saints, Bank Top, Bangor Street, Blakey Moor, Parish Higher Grade, Cedar Street, Emmanuel, Christ Church (Infants), Christ Church (Senior), Furthergate, Four Lane Ends, Griffin, Lower Darwen Council, Moss Street, Mill Hill, Norfolk Street, Park Road, Corporation Park (Open Air), Sacred Heart, St. Alban's, St. Anne's, St. Barnabas', St. Bartholomew's, St. James' (Black-a-Moor), St. John's, St. Joseph's, St. Luke's, St. Mary's, St. Matthew's, St. Peter's C.E., St. Peter's R.C., St. Silas', St. Stephen's, Wensley Fold, Witton Infants', Regent Street Special School.

All this has involved a considerable amount of inspection and correspondence. There are still a few schools in which much still remains undone, and some in which everything necessary has already been completed.

MEDICAL INSPECTION.

In accordance with the practice inaugurated last year routine inspections were made of all children (a) at their entrance to school—"entrants"; (b) at the age of 8 years, that is to say

children born during the year 1915—"intermediates"; (c) at the age of 12 years, that is those born in the year 1911 or those who had not been subjected to routine inspection since reaching their twelfth birthday—"12-year olds"; (d) those born in the year 1909—"leavers." Owing to the small number of entrants it was found possible to examine the full complement of fourteen-year olds, and the results of these examinations were most useful to the Juvenile Employment Committee. The following table gives the number of examinations made:—

TABLE I.

RETURN OF MEDICAL INSPECTIONS.

A—ROUTINE MEDICAL INSPECTIONS.

Number of Code Group Inspections.	1923.	1922.
Entrants	1014	1675
Intermediates	1725	1960
Twelve-year Olds	1755	1904
Total	4494	5539
Fourteen-year Olds (Leavers)	1543	774
Total	6037	6313

B—OTHER INSPECTIONS.

Number of Special Inspections	2206	...	2279
,, Re-inspections	1826	...	2952
Total	4032		5231

The total number of individual children inspected by the Medical Officers, whether as routine or special cases, no child being counted more than once in the year, was 7,166 compared with 7,487 in 1922.

The 2,206 special cases include 137 children under five years of age who were not subjected to a detailed examination. They will be re-examined and a full inspection made when they attain the age of five years: the great majority of the under fives are now examined fully within a few months of their admission to school.

Table 2.

WORK OF PAST YEARS. The following table shows the number of medical examinations year by year since the inauguration of the work :—

ELEMENTARY SCHOOLS.				SECONDARY SCHOOLS.		
Year	Routine Inspections.	Special Examinations.	Re-examinations.	Examinations.	Re-examinations.	Total.
1908	2118	654	...	...	...	2772
1909	4581	485	...	...	...	5066
1910	7606	385	...	...	...	7991
1911	9064	527	1874	...	...	11465
1912	4972	583	2403	...	...	7958
1913	4763	1630	2227	...	...	8620
1914	5056	883	949	...	...	6888
1915	4968	1543	1789	...	...	8280
1916	4922	1107	2447	...	...	8476
1917	6240	2039	2061	...	...	10340
1918	3053	1656	1588	...	...	6297
1919	7138	1679	1957	...	...	10774
1920	5935	2076	4859	...	...	12870
1921	6045	2102	3536	938	105	12726
1922	6313	2279	2952	361	148	12053
1923	6037	2206	1826	383	38	10490

PARENTS. Taking the examinations as a whole, the percentage of parents present was 20.8% compared with 24.4% in 1922. The number of parents present during the inspection of the youngest children showed, however, an increase, namely, 41% compared with 38% in 1922.

FINDINGS OF MEDICAL INSPECTION. The particulars required by the Board of Education in their new official tables have been provided and are printed in this report. The information is not so detailed as that which was required formerly, and it is hoped that the tables will remain in their present form for many years.

TABLE II.

A—RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION IN THE YEAR ENDED 31ST DECEMBER, 1923.

Detail of Disease.	Routine Inspections,		Special Inspections.	
	No. of Defects,		No. of Defects,	
	Requiring treatment.	Requiring to be kept under observation but not requiring treatment.	Requiring treatment.	Requiring to be kept under observation but not requiring treatment.
(1)	(2)	(3)	(4)	(5)
No. EXAMINED.	6037		2206	
Malnutrition	14	12	1	...
Uncleanliness	444	1	92	...
(See Table IV., Group V.)				
SKIN.				
Ringworm : Sc a	3	...	116	...
Body	3	...	89	...
Scabies .....	..	...	17	...
Impetigo	21	...	387	...
Other Diseases : (Non-Tubercular)	15	1	119	...
EYE.				
Blepharitis	17	1	33	...
Conjunctivitis	5	...	31	...
Keratitis .....	..	...	2	...
Corneal Opacities	2	...	1	...
Defective Vision (excluding Squint)	338	191	136	19
Squint	34	7	...	...
Other Conditions	8	...	40	...
EAR.				
Defective Hearing	15	5	2	...
Otitis Media	16	1	33	...
Other Ear Diseases	19	...	33	...
NOSE AND THROAT.				
Enlarged Tonsils Only	95	199	3	6
Adenoids Only	7	12	6	...
Enlarged Tonsils and Adenoids	79	17	16	...
Other Conditions	7	1	5	...
Enlarged Cervical Glands (non-tubercular) .....	...	17	1	...
Defective Speech	29	3	1	1
TEETH—Dental Diseases (reported by Doctor). For Dentist's Examinations see Table IV., Group IV.	131	...	10	...

TABLE II.—Continued.

Defect or Disease.	Routine Inspections.		Special Inspections.	
	No. of Defects,		No. of Defects,	
	Requiring treatment.	Requiring to be kept under observation but not requiring treatment.	Requiring treatment.	Requiring to be kept under observation but not requiring treatment.
(1)	(2)	(3)	(4)	(5)
HEART AND CIRCULATION.				
Heart Disease : {				
Organic	6	29	2	...
Functional	1	45	...	3
Anæmia	37	38	20	1
LUNGS.				
Bronchitis	11	22	10	1
Other Non - Tubercular Diseases .....	...	4	3	2
TBERCULOSIS.				
Pulmonary :				
Definite	1	2	...	...
Suspected .....	...	7	...	1
Non-Pulmonary :				
Glands	3	6	6	...
Spine .....	...	1	...	...
Hip .....	...	...	...	...
Other Bones and Joints ...	...	...	...	...
Skin .....	...	...	...	1
Other Forms .....	...	1	1	...
NERVOUS SYSTEM.				
Epilepsy .....	...	...	2	...
Chorea .....	...	1	7	1
Other Conditions .....	...	...	1	...
DEFORMITIES.				
Rickets	4	6	...	...
Spinal Curvature	24	...	...	...
Other Forms	4	1	...	...
Other Defects or Diseases ...	13	51	118	3

Number of individual children having defects which required treatment or to be kept under observation 3433

TABLE II.—Continued.

B—NUMBER OF INDIVIDUAL CHILDREN FOUND AT ROUTINE MEDICAL INSPECTION TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).

GROUP I	Number of Children			Percentage of children found to require treatment 4
	Inspected 2	Found to require treatment 3		
CODE GROUPS.				
Entrants	1014			
Intermediates	1725			
Leavers	1755			
Total (Code Groups)	4494	886		14.6
Other Routine Inspections	1543			
Grand Total	6037			

It will be seen from Tables I. and II. that of the 7,166 children examined, either as routine or special cases, 3,433 or 48% suffered from a defect which required either to be treated or to be kept under observation.

The next Table (V.) gives the total number of defects found amongst children examined at routine inspection; that is children selected not because of suspected defect, but solely because they happened to be of the requisite ages. Many of these defects were not of a very serious nature; 886, however, of those subjected to routine inspection, or 14.6% of the total, were in urgent need of treatment; this compares with 13.6% in 1922 and 23.4% in 1921.

TABLE V.

SUMMARY RELATING TO CHILDREN MEDICALLY INSPECTED AT
ROUTINE INSPECTIONS IN THE ELEMENTARY SCHOOLS DURING
THE YEARS 1922 AND 1923.

		1923.		1922.	
		No.	Per Cent.	No.	Per Cent.
1.	Total number of children medically inspected at routine inspections	6037		6067	
2.	Number of children in (1) suffering from :—				
	Malnutrition	26	0.4	40	0.6
	Skin Disease	43	0.7	37	0.6
	Defective Vision (including Squint)	94 ¹	15.5	822	13.5
	Eye Disease	43	0.7	55	0.9
	Defective Hearing	27	0.4	33	0.5
	Ear Disease	5 ¹	0.8	20	0.3
	Nose and Throat Disease	1093	18.1	938	15.3
	Enlarged Cervical Glands (Non-Tubercular)	1400	23.1	1063	17.5
	Defective Speech	4 ¹	0.6	34	0.5
	Dental Disease (Medical Inspection only)...	1447	23.9	1072	17.6
	Heart Disease :—				
	Organic	46	0.7	34	0.5
	Functional	68	1.1	49	0.8
	Anæmia	98	1.6	86	1.4
	Lung Disease (Non-Tubercular)	89	1.4	69	1.1
	Tuberculosis :—				
	Pulmonary (definite)	3	0.05	7	0.1
	Pulmonary (suspected)	7	0.1	5	0.08
	Non-Pulmonary	1 ²	0.2	26	0.4
	Diseases of the Nervous System.....	1	0.01	15	0.2
	Deformities	226	3.7	202	3.3
	Other Defects and Diseases	110	1.8	145	2.4

On comparing the 1923 figures with those for 1922 it will be noted that for many defects the percentage has increased; this does not necessarily mean a worsening of the physical condition of the children but rather a change in the standards adopted by the examining doctors.

DEFECTS IN THE DIFFERENT AGE GROUPS. The following Table shows the percentages of children in the different age groups in whom no physical defect, even of a minor character, was found :—

		1923.			
	Entrants.	Olds.	Olds.	Leavers.	Total.
Boys	42	38	59	63	50
Girls	48	41	52	58	49

These figures show that only one half of the children had no defect, that their condition is worst at eight years of age and that it improves until at fourteen years of age the percentage of fit children has increased to approximately 60 %. It is in

accordance with general experience that the common defects of child life, for example, defective teeth, enlarged tonsils or enlarged glands, are commonest about 8 years of age.

During 1923 an effort was made to examine fully all entrants to school including those under 5 years of age and not, therefore, required to attend school compulsorily : particulars of these cases are included in the routine inspections. In 137 cases, included amongst the "specials," the examination of these very young children was of a cursory nature only, but, even so, the following defects were found :—

Squint	5
Enlarged Glands in Neck	8
Enlarged Tonsils	5
Speech defect	1

CLOTHING AND FOOTWEAR. Of the 6,037 children seen by the Assistant School Medical Officers at the routine inspections, in only 16 was it necessary to describe the clothing as "dirty." Nine children, six of whom were girls, were reported to be poorly clad. Many children were over-clothed : it is not realised that too many clothes, especially round the chest, increase perspiration and make a child delicate and liable to take cold ; nor that tight clothing prevents proper expansion of the lungs.

HEIGHT, WEIGHT, AND NUTRITION. There are weighing machines in nine schools, and at the school clinic. It is most important that a machine should be provided in every school so that the scholars may be weighed regularly in every elementary school in the town just as they are in the secondary schools. The best indication of good or ill-health of a child, namely, gain of weight or failure to do so, should be available in every school. In the absence of weighing machines, the assessment of the nutrition of a child varies considerably with the personal equation of the examiner. There were only 12 boys and 14 girls who were regarded by the Assistant School Medical Officers as "ill-nourished," the percentage of those examined being 0.4% boys and 0.5 % girls. In 1922 the figures for boys were the same as this year : that for girls was double, namely, 29 compared with 14. The nutrition of 9 % of the scholars was regarded as "excellent," 73.6 % good, and 17 % "medium." All these figures are very similar to those of previous years. Taking into consideration the large amount of unemployment during the past few years, it is remarkable that the nutrition of the children does not appear to have suffered.

CLEANLINESS. The routine inspections record that the hair of 12 boys and 364 girls contained a large number of nits, which are the eggs of lice. The corresponding figures for 1922 were 18 boys and 395 girls. The doctors noted that the bodies of 33 boys and 24 girls were very dirty. As there are so many houses in the town where there is no fixed bath, the question of providing facilities for school children to have cheap, hot baths, at a public institution, should be considered. The scheme under which the School Nurses pay surprise visits to the schools and examine all the children for cleanliness has now been in operation for three years. The boys showed no improvement between 1921 (81.5% clean) and 1922 (80.7% clean), but in 1923 they were much better (90.1%) clean. The girls, however, who showed considerable improvement when 1922 was compared with 1921 (42.1% clean in 1921, 63.2% clean in 1922), have shown a deterioration in 1923 (59.6% clean), and although they are much better than when the work was started in 1921, their condition is still very unsatisfactory.

TABLE 3.

The following Table gives the results of the first examinations:—

	No. examined	Clean	A few Nits	Num- erous Nits	Very numerous Nits	Vermin seen
BOYS.						
1923	6,456	5,817	290	149	117	83
Per cent. ...		90.1	4.5	2.2	1.9	1.3
1922	7,231	5,834	625	344	296	132
Per cent. ...		80.7	8.6	4.7	4.1	1.9
GIRLS.						
1923	7,624	4,545	1,400	1,025	558	96
Per cent. ...		59.6	18.4	13.4	7.3	1.3
1922	7,591	4,801	1,328	855	438	169
Per cent. ...		63.2	17.5	11.3	5.8	2.2

PERCENTAGE WITH CLEAN HEADS.

	Boys.	Girls.
1921	81.5	42.1
1922	80.7	63.2
1923	90.1	59.6

The School Nurses made in the schools 25,014 examinations for uncleanliness, compared with 19,193 in 1922 and 28,623 in 1921. The next Table compares the first with the final examinations, and shows a considerable improvement.

RESULTS OF FINAL EXAMINATIONS.

		A few Nits	Numerous Nits	numerous Nits	Very Vermin seen
Boys, 1923:	final	63	14	15	3
	first	290	149	117	83
Girls:	1923: final	902	469	106	25
	first	1400	1025	558	96

Twenty-nine boys and 48 girls were so verminous at the first examination that they had to be excluded from school for a few days. In 1922 the figures were 88 boys and 48 girls.

During 1923 the number of home visits for uncleanliness paid by the School Nurses was 598. The number cleansed at the Cleansing Station was 21, and another 76 had their heads cleansed at a Minor Ailments Clinic. Many mothers are deeply concerned when their attention is drawn to the presence of nits in their children's hair, and after trying vainly to get rid of them, they apply to us for advice. The Authority have purchased 24 Sacker's Combs, which are lent to mothers who cannot afford to buy one. With the aid of this comb even a very dirty head can be cleansed in a few hours. The combs were lent on 174 occasions.

A useful feature of the Nurses' visits to the schools to examine for cleanliness was their discovery of other conditions which had arisen since the last routine medical inspection. The following is a list:—

Impetigo	137
Eye Diseases	27
Ear Diseases	29
Ringworm	34
Defective Vision	40
Scabies (the Itch)	6
Miscellaneous	127

These children were referred for treatment to their private doctors or to the Clinics.

NOSE AND THROAT. In 18.1% of the children examined at routine inspections there was some defect of the nose or throat. The percentages with enlarged tonsils were:—Moderate enlargement of both tonsils 9.1%, great enlargement of one tonsil only 0.8%, great enlargement of both tonsils 3.6%. Children were not put on the list for treatment solely because of enlargement of the tonsils. In all cases of tonsillar enlargement recommended for treatment the tonsils appeared to the examining doctor to be unhealthy. This obtained in 95 cases, and in addition 79 cases of adenoids, generally associated with tonsillar enlargement, were recommended for treatment. It was noted that in 110 cases submitted to routine inspection, an operation on the throat had been performed previously. All these figures are similar to those of previous years.

SKIN DISEASES. Diseases of the skin are very common amongst school children, as the following Table indicates. The increase in the recorded cases is not necessarily due to an increased prevalence, but may be the result of the popularity of the Clinics which tends to bring all the cases to the notice of the School Medical Officer.

TABLE 4.

CASES DISCOVERED AT ROUTINE OR SPECIAL EXAMINATIONS BY
DOCTORS OR NURSES.

	1920	1921	1922	1923
Ringworm of the Head	139	82	90	119
Ringworm of the Body	39	19	72	92
Scabies	301	59	19	17
Impetigo	455	420	384	408
Other Skin Diseases	158	99	56	135
	—	—	—	—
	1092	679	621	771
	—	—	—	—

DEFECTIVE VISION AND SQUINT. Squint was discovered in 54 boys and 54 girls. In 32 boys and 35 girls correcting glasses were being worn.

Three hundred and ninety-five boys and 329 girls, being 16.4% and 13.9% of those examined, had in their worse eye vision of 6/12 or 6/24 only on Snellen's scale. Fifty-five boys and

54 girls had seriously defective vision (6/36 or worse in one or both eyes). Amongst so many cases of defective vision only 155 boys and 133 girls were, at the time of inspection, wearing suitable spectacles, but this is an improvement of 1922, when the figures were 85 boys and 116 girls.

DENTAL. During 1923 the School Dentist examined the teeth of all the children born in 1918, and re-examined the children born in the years 1914 to 1917. The results of her inspection will be found on page 40. The Assistant School Medical Officers record only cases of gross decay and not the small foci discovered by the Dentist with the aid of a probe and mirror. They reported 11 cases of marked oral sepsis (pyorrhœa) and 129 of serious dental caries.

TUBERCULOSIS. At the routine inspection 3 cases of definite and 7 of suspected tuberculosis of the lungs were found. There were 9 cases of tuberculosis of the glands of the neck and 1 of tuberculous disease of the spine. All these cases, however, with one exception, had been previously notified to the Medical Officer of Health.

TUBERCULOSIS CONTACTS. Children who have lived in the same house as cases of pulmonary tuberculosis were examined: 55 of these contacts were reported upon in 1923 and in one the disease was found.

HEART DISEASE. Twenty-one girls and 25 boys were discovered at routine inspection to be suffering from valvular disease of the heart, and 24 boys and 44 girls from functional disease: these figures are slightly in excess of those for the previous year. Forty-eight boys and 50 girls were reported to be anaemic, compared with 31 boys and 55 girls in 1922.

DEFORMITIES. Ricketty deformities were noted at routine inspection in 93 boys and 71 girls. Sixteen boys and 22 girls were suffering from spinal curvature, and 15 boys and 9 girls had other deformities. These 24 cases included 11 of infantile paralysis and 1 of congenital dislocation of the hip.

DEFECTS OF SPEECH. At routine inspections 29 boys and 12 girls were noted to have defective speech: this is the usual proportion between the male and the female sex.

During 1923 Miss Drummond was able to take only two classes for stammerers, as her services were required elsewhere. Ten children in each class received a six-weeks course of instruction. In all cases except one good progress was made. At the end the children could read and recite with ease and speak without hesitation or difficulty. The exceptional case was one of "dumb stammering." Progress was slow, and owing to lack of support from the parents it was felt that nothing further could be done.

Miss Drummond's report is as under:—

"Classes for stammering children commenced in August, 1921, and continued until April, 1923. During this period 84 children have received special instruction for the elimination of this speech defect. Forty-six received further treatment by attending short revision courses: this had the important influence upon the stammerer of arresting any tendency to back-slide. Results obtained by the application of the "Berquand" method have been most satisfactory and are summarised as follows:—

Speak well and clearly, no stammer	53
Speak with occasional hesitation	14
Improved	9
Not cured	8
<hr/>	
	84

The conclusion I have drawn is that even the worse cases of stammering are curable when there is co-operation between parent and teacher, and, considering the seriousness of the affliction, at comparatively small cost.

In cases where there has been complete failure to make progress in reading, recitation, or conversation, it was owing to the indifference of the stammerer, coupled with the parents' lack of appreciation and ignorance of the value of the instruction given."

A leaflet on defective speech has been issued. It reads:—

"BLACKBURN EDUCATION COMMITTEE.
DIRECTIONS FOR THE TREATMENT OF STAMMERING AND DEFECTIVE SPEECH.

1. Practise deep breathing exercises for ten minutes every morning.

2. Always take a deep breath before attempting to speak, and speak with a loud voice. Never hold the breath, as this is one of the causes of stammering.

3. Speak slowly and deliberately: do not hurry over your words and do not change your mind as to the word you will use in the middle of a sentence.

4. Allow the tongue, lips and throat to do their work easily. Move the lips well.

5. Do not talk jerkily, or take short, sharp breaths when speaking.

6. Commence slowly, then increase in speed and finish slowly.

7. Note the letters stammered over, especially those in ordinary conversation, and practise them.

8. Read aloud for ten minutes every day. Do not stop between your words when reading, but join them, as you do when singing. All stammerers can sing because notes are sustained.

9. Do not talk about stammering, or let others talk to you about it. Try not to get angry or excited.

Keep these Rules carefully for a few months; carry out the instructions every day, and you will find that you will become completely cured of stammering."

OTHER DEFECTS. Sixty-one "other defects" were noted on the medical inspection schedules. These include 37 cases of enlargement of the thyroid gland, seven of rupture, and four of wry neck.

INFECTIOUS DISEASES.

During the year there was a gratifying absence of serious infectious disease, and the average attendance in the public elementary schools increased from 87.8% to 88.2%. The following Table shows the total number of cases of the infectious diseases

mentioned which were notified or reported in the Borough and the number of those which occurred amongst school children.

	Total				Number known in the whole Borough.				Number occurring amongst School-children.			
	1920	1921	1922	1923	1920	1921	1922	1923	1920	1921	1922	1923
Diphtheria	69	45	52	35		43	21	21				17
Scarlet Fever	182	211	232	216		128	153	147				147
Enteric Fever	5	2	5	3		—	—	—				1
Measles	1446	57	1688	427		1435	54	1547				373
Whooping Cough	17	309	171	318		14	351	105				289
Chicken Pox	244	247	264	237		239	243	261				225
Mumps	57	75	156	175		57	75	156				174

The low incidence of scarlet fever and diphtheria is especially remarkable. Only one school closure was necessary, namely, that of the Infants' Department of St. Stephen's School, which was closed because of the excessive prevalence of whooping cough from the 23rd November to the 10th December.

Information of infectious disease in the schools is much more complete since the coming into operation of the Blackburn Corporation Act, 1922. The effect of Section 76 is to require the parents of any child attending a Day or Sunday School to notify the Head Teacher at once should any infectious disease, such as SCARLET FEVER, DIPHTHERIA, MEASLES, GERMAN MEASLES, WHOOPING COUGH, CHICKEN POX, or INFLUENZA, occur in ANY MEMBER OF THE FAMILY, or should there be reason to suspect that an infectious disease is developing. The penalty for failure to comply with this requirement is Twenty Shillings (20/-).

VACCINATION. The entrants were unvaccinated to the number of 58% of the boys and 54% of the girls: 63% of the leaving boys and 62% of the leaving girls were unvaccinated: for the first time for some years the entrants are better vaccinated than the leavers.

FOLLOWING-UP.

WORK OF THE SCHOOL NURSES. Sickness amongst the nursing staff was not so serious as in 1922, when 100 school sessions were lost between the four nurses; but one of the nurses was absent on sick leave for a month.

During the year the School Nurses paid 2,854 home visits: 2,256 to urge medical treatment and 598 to give advice about uncleanliness. The School Nurses assisted the Medical Inspectors in school for 251 sessions and at the Inspection Clinic for 92; the Dentist in School for 124 sessions and at the Dental Clinic for 319.

They assisted the Ophthalmic Surgeon on 63 occasions and treated children at the Minor Ailments Clinics for 584 sessions.

The need for increasing the nursing staff has been mentioned already (page 12).

The Authority provides treatment for defects for which otherwise the provision is inadequate. A list of the Clinics and where and when held is given on page 7.

The following Table shows how the work at the Clinics has increased during the past four years:—

CLINIC ATTENDANCES.

Year.	Minor Ailmen's Clinics.	Ophthalmic Clinic.	Inspection Clinic.	Dental Clinic.	Nose and Throat Clinic.	Remedial Exercises Clinic	Total.
1920	1012	407	3433	...	...	...	4852
1921	8527	1289	2995	1658	159	356	14984
1922	10801	959	1806	2801	99	679	17145
1923	11264	666	1465	3886	251	773	18305

CHARGES FOR TREATMENT. As the result of pressure from the Board of Education, a scheme of charging for treatment given at some of the clinics has been put into operation. It was felt that the use of complicated enquiry forms relating to size of family and earnings would necessitate considerably greater cost than the amount collected; moreover, it would deter many parents from sending their children to the clinics, with the result that they would not obtain any treatment, and in this way the main object of the School Medical Service, the treatment of disease in its early stages, would be defeated. It has been agreed, therefore, that the only cases in which efforts must be made to assess the family income accurately are those where parents desire their children to have in-patient treatment at the Queen's Park Hospital for adenoids and enlarged tonsils. A charge of £2/12/6 plus 7/- for each night after the third is made to the Education Authority by the Guardians. Twenty-seven cases

were dealt with during 1923, and £3/11/3 was collected. The Authority is charged £1/11/6 for cases operated upon as out-patients at the Royal Infirmary. At first an endeavour was made to obtain contributions towards this sum from the parents, but they refused on the ground that they were contributing already to the Infirmary through the Workpeople's Hospital Fund, to which practically every working-man and woman in the town contributes every week. It was apparent that the collection of even a few shillings from these parents would jeopardise the success of a scheme which provides over £12,000 annually to the Infirmary, and the Authority, therefore, deemed it advisable to forego a charge for these out-patient cases. The Board of Education now ask the Education Authority to request the Board of Management of the Royal Infirmary to reduce their charge for operating upon the children of subscribers to the Workpeople's Hospital Fund, but there is considerable difficulty in determining who is and who is not a subscriber.

Spectacles never have been supplied free: they are, however, provided for the poor at cost price and the amount is taken in small weekly instalments. The clinics for minor ailments are provided only for those whose parents cannot afford private medical treatment: no charge is made therefor. A box for voluntary contributions contained 4/9 after it had been in use for six weeks.

The number of children, with defective teeth, whose parents consented to allow them to attend the Dental Clinic, even when treatment was free, was less than 50 %, and it was felt that the institution of enquiries about income would reduce it even further. A scheme has, however, had to be put into operation under which a charge of 6d. is made for each attendance when the income of the child's family exceeds 10/- per head per week after deducting rent. No forms are used, and the enquiries are not made until the treatment has been given, when the School Nurse asks those who appear to have an income in excess of the scale to contribute 6d.; the average amount obtained during the first three months was 25/- a month.

The School Dental Service was provided to improve the teeth, and incidentally the general health, of the rising generation. It is not a popular service owing to the reluctance with which even adults visit a dentist: it has much prejudice to overcome. The

receipts from a contributory system will never be large, because those who can afford to pay will not go ordinarily to a public dentist. If treatment of dental defects were compulsory the position would be very different and an equitable charge could be made, but so long as people can refuse with impunity to obtain any treatment, even for serious dental defects, it does seem a pity that the service should be hampered by having this scheme of contributions imposed upon it.

MINOR AILMENTS. The following Table gives particulars of the cases of minor ailments dealt with during the year:—

TABLE IV.

GROUP I.—MINOR AILMENTS (excluding uncleanliness, for which see Group V., page 32).

Disease or Defect.	No. of Defects treated or under treatment during the year.		
	Under the Authority's Scheme	Otherwise	Total
SKIN—			
Ringworm—Head	97	27	124
Ringworm—Body	87	7	94
Scabies	13	4	17
Impetigo	391	24	415
Other Skin Diseases	100	34	134
MINOR EYE DEFECTS—			
(External and other, but Excluding cases falling in Group II.)....	151	4	155
Minor Ear Defects	113	7	120
MISCELLANEOUS			
(e.g., Minor Injuries, Bruises, Sores, Chilblains, etc.)	113	25	138
Totals for 1923			
Totals for 1923	1065	132	1197
Totals for 1922			
Totals for 1922	1007	285	1292
Totals for 1921			
Totals for 1921	682	842	1524

The above Table shows that the number of children requiring treatment for minor ailments is decreasing, but that the proportion being treated at the Authority's clinics is increasing. Those under the heading "treated otherwise" are mostly children who receive ointment or other domestic treatment: the number who attend a private doctor is very small.

The following Tables show that 848 cases were dealt with during the year at the Town Hall Treatment Clinic, and 282 at Bolton Road:—

Table 5.

TOWN HALL TREATMENT CLINIC.

Disease.	Brought Forward from previous year	No. of New Cases	No. of Attendances	Number excluded from School	Average Number of Attendances before fit for School	Still attending at end of Year
Ringworm — Head	4	72	1245	60	13.8	10
Ringworm — Body	1	72	797	65	9.7	10
Impetigo	6	275	2026	117	6.6	14
Blepharitis	5	33	723	3	10.3	2
Other Eye Disease's	6	44	640	7	11.4	5
Conjunctivitis	5	28	659	16	12.3	4
Ear Discharge	1	36	636	3	11.0	4
Wax in Ears .....	...	21	185	...	...	1
Other Ear Disease's	...	27	389	2	19.5	5
Seborrhœa .....	...	4	21	2	7.0	...
Scabies .....	...	8	40	8	4.1	...
Sores — Head (Vermin) .....	...	57	186	51	2.1	2
Sores — Body (Vermin) .....	...	3	6	3	1.0	...
Minor Injury .....	...	32	219	4	9.2	2
Miscellaneous	1	107	796	14	7.5	3
 Total 1923...	29	819	8568	355	...	62
 Total 1922...	44	721	6813	303	...	29

Table 6.
BOLTON ROAD TREATMENT CLINIC.

Disease.	Brought Forward from previous year	No. of New Cases	No. of Attendances	Number excluded from School	Average Number of Attendances before fit for School	Still attending at end of Year
Ringworm — Head	...	21	597	18	22.4	4
Ringworm — Body	1	13	135	9	8.7	2
Impetigo	1	109	826	44	7.3	4
Blepharitis .....	...	20	145	1	6.0	...
Conjunctivitis ....	...	3	29	1	9.0	...
Other Eye Diseases	...	7	20	...	...	...
Ear Discharge ...	1	16	192	...	..	3
Wax in Ears .....	...	4	16	...	...	...
Other Ear Diseases	...	7	53	...	...	...
Seborrhœa .....	...	5	186	4	8.4	1
Sores — Head (Vermin) .....	...	16	75	12	2.9	...
Minor Injury	1	15	99	1	6.0	...
Miscellaneous	2	40	323	4	4.2	...
 Total 1923	6	276	2696	94	...	14
 Total 1922	20	222	1848	83	...	6

The average daily attendance at the Town Hall Clinic was 29; and at 119, Bolton Road, 9.

CLEANSING STATION. Twenty-one school-children were dealt with at the Throstle Street Station: 10 because they suffered from scabies (the itch) and 11 because they were very verminous. In these serious cases the other members of the family are given an opportunity of attending with the school-children, and while the cleansing is in process the bedding and house are disinfected. The response of the adults was not very good, but 24 persons altogether were cleansed during the year. The total number of cleansings was 47: these include 2 adults and one child under school age.

The following Table gives the particulars required by the Board of Education:—

TABLE IV.

GROUP V.—UNCLEANLINESS AND VERMINOUS CONDITIONS.

(I.) Average number of visits per school made during the year by the School Nurses

(II.)	Total number of examinations of children in the schools by School Nurses	25014
(III.)	Number of individual children found unclean	3798
(IV.)	Number of children cleansed under arrangements made by the Local Education Authority	*271
(V.)	Number of cases in which legal proceedings were taken :—	
	(a) Under the Education Act, 1921	none
	(b) Under School Attendance Byelaws	none
	* Clinic	76
	* Loan of Comb	174
	* Cleansing Station	21

LOSS OF SCHOOL ATTENDANCES

THROUGH EXCLUSION OF CHILDREN SUFFERING FROM MINOR AILMENTS.

The following Table shows, for the year 1923, the number of school children suffering from Minor Ailments requiring exclusion from school and the number of days (including Sundays, Saturdays, and School Holidays) those children were excluded during the year :

Table 7.

Disease.	No. of excluded cases brought forward from previous year	Total No. of New Cases excluded during the year	No. of days excluded	No. of Cases on books at end of year
Ringworm—Head	4	100	2908	18
Ringworm—Body	2	79	1792	12
Scabies .....	...	17	282	...
Impetigo	5	172	3581	19
Verminous Conditions ..	3	112	1311	2
Ear Diseases	1	5	73	2
Eye Diseases	3	26	1392	4
Other Skin Diseases ....	..	25	407	3
Miscellaneous	1	10	150	...
Total, 1923 ..	19	546	11896	60
Total, 1922...	49	641	12135	19
Total, 1921..	76	1009	21883	49

A comparison of the number of days excluded in 1923 or 1922 with that in 1921 shows a remarkable reduction in the amount of school time lost because of minor ailments—mostly contagious skin diseases—and in itself justifies, both on educational and financial grounds, the expenditure on the school clinics which deal with these conditions.

The average period of exclusion, for each disease, of children re-admitted to school during the past three years is shown below, and indicates for most diseases a considerable improvement :—

	Average Period of Exclusion in days.		
	1923	1922	1921
Ringworm, Head	27.9	29.8	44.8
Ringworm, Body	22.1	18.6	22.7
Scabies	16.5	25.2	40.1
Impetigo	22.3	16.4	22.8
Other Skin Diseases	16.2	21.6	24.0
Verminous Conditions	11.4	12.8	12.5
Eye Diseases	48.0	29.6	28.5
Ear Diseases	12.1	23.4	28.5
Miscellaneous	13.6	28.2	16.0

The most striking feature of this Table is the reduction in the average period of exclusion of cases of ringworm of the scalp to 27.9 days. The iodine-calomel treatment described in last year's report is still used and is very successful.

VISUAL DEFECTS. During the year 508 children with defective vision were referred for treatment, and there were 74 cases outstanding from 1922. Three hundred and eighty-three new cases were examined with a view to the prescription of spectacles : these include the cases left over from 1922 ; in addition 186 children returned to the Ophthalmic Clinic to ascertain whether or not their spectacles should be changed. Three hundred and fifty-three of the new cases attended the Authority's Ophthalmic Clinic. In 29 cases spectacles were prescribed by an optician and in one case by a private medical practitioner.

The next Table gives the particulars required by the Board of Education :—

TABLE IV.

GROUP II.—DEFECTIVE VISION AND SQUINT.

Disease or Defect.	Number of Defects dealt with.			
	Under the Authority's Scheme.	Submitted to refraction by private practitioner or at Hospital apart from the Authority's Scheme.	Otherwise.	Total.
Errors of refraction (including squint.)	*539	1	29	569
Other defect or disease of the Eyes (excluding those recorded in Group 1).	23	...	...	23
Total	562	1	29	592

* Including Cases Re-examined to see whether Glasses should be changed.

Nine cases of eye disease also suffered from errors of refraction.

Total number of Children for whom Spectacles were prescribed:

(a) Under Authority's Scheme	361
(b) Otherwise	30

Total number of Children who obtained or received Spectacles:

(a) Under Authority's Scheme	298
(b) Otherwise	30

The number of children awaiting examination for glasses at the end of 1923 was 172: this is apart from 27 children with defective vision who left school during 1923 without having obtained a prescription: they were referred to the After-Care Committee. The number of outstanding cases at the end of 1922 was 74, at the end of 1921, 247, and at the end of 1920, 286. The 172 cases awaiting examination at the end of 1923 include 72 children for whom an appointment was made at the clinic but who did not attend, and 4 who attended once but never returned. During the year 361 prescriptions were issued at the Ophthalmic Clinic: 328 for children who had never worn spectacles before and 33 for children whose lenses had to be replaced.

The number who actually obtained spectacles was 298, leaving 63 who made no use of the prescriptions. They include 14 children who left school for employment without obtaining glasses and one child who left the country. The obtaining of the 298 pairs of spectacles was the result of considerable effort. The doctor at the clinic advised the parents to obtain glasses, the School Nurses and the School Attendance Officers followed up this advice by visiting the homes, and in 98 obdurate cases the Inspector of the National Society for the Prevention of Cruelty to Children was requested to call. After persuasion, warning and numerous visits he succeeded in obtaining glasses for 96 of those referred to him. Two parents refused absolutely to provide glasses. Prosecution under the Children Act for neglecting the child's health was considered, but as the visual defects in both these cases were only of a moderate and not of a severe character it was decided that it was inadvisable to proceed further.

The Authority, during 1923, paid £64/6/9 for spectacles and recovered £48/0/9 towards their cost.

Apart from the difficulty in persuading parents to buy spectacles, there is a further difficulty in ensuring that the children wear them. Enquiry shows that many children who have had spectacles prescribed at the public cost do not wear them even in school, and I would appeal again to the teachers to require all children who ought to wear glasses to do so.

The following is the Statistical Report on the 441 cases seen at the Ophthalmic Clinic, which was held on 63 sessions compared with 78 in 1922 :—

Table 8.

OPHTHALMIC CLINIC.

	Discharged after appropriate treatment.
EYE DISEASES.—	
Blepharitis	1
Phlyctenular Conjunctivitis	1
Nebulæ (Corneal)	10
Cataract (Congenital)	5
Other Eye Diseases	6—23
EXAMINED FOR REFRACTIVE ERRORS.—	
Emmetropia (Normal Vision)	19
Simple Hypermetropia	35
Hypermetropic Astigmatism	134
Mixed Astigmatism	67
Myopia	38
Myopic Astigmatism	60—353
TOTAL	376

Cases of refractive error who received Homatropin but did not return for glasses to be prescribed	4
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Nine cases of eye disease also suffered from errors of refraction.

Twenty-nine of the above-mentioned children suffered from convergent squint.

SERIOUSLY DEFECTIVE VISION. In 38 of the children for whom glasses were prescribed at the Clinic the error of refraction was over five dioptres, a very serious amount. In 36 of these cases glasses have been obtained already.

CHRONIC INFLAMMATION OF THE EYE. Throughout the year selected cases of phlyctenular conjunctivitis have been treated with tuberculin (B.E.). A number of children, generally ill-nourished, are found each year where the usual methods of treatment by drops and lotions fail to clear up this condition completely. Unfortunately any prolonged inflammation of the central part of the eye (the cornea) gives rise to the formation of ulcers which, even when healed, produce either haziness or opacities, materially interfering with the admission of light into the eye and consequently causing a greater or less degree of visual defect. Any method of treatment, therefore, which will reduce the length of time during which the cornea is inflamed will have the very great advantage that it will leave less visual defect than otherwise would be the case, and might, if applied early enough, prevent any visual defect from developing. Our experience during 1922 and 1923 leads us to believe that by using tuberculin injections we can reduce certain types of inflammatory condition of the eyes sooner than by local treatment alone, and at the same time it is found that such conditions have less tendency to recur if the injections are kept up for some time after the inflammation has subsided. The treatment was started in 1921, and since then 21 cases have been dealt with. The average number of injections has been 19. In one case 38 injections were necessary. One case has only had one injection, and of course no improvement has yet been effected. The disease has been quiescent for three months or longer in 16 cases. Improvement has taken place in the remainder of the cases, except one boy who has had 30 injections of tuberculin and who is showing very little change. It is probable, however, that in this case there is present a constitutional disease which is not susceptible to this particular form of treatment.

				Discontinued.	
Cases Under Treatment, 1st Jan., 1923.	New Cases during 1923.	Cases Quiescent.	No Further Improve- ment likely.	Under Treat- ment, 1st Jan., 1924.	
18	3	16	4	1	

ADENOIDS AND ENLARGED TONSILS. At the beginning of 1923 the parents of 71 children who were awaiting operative treatment for adenoids and enlarged tonsils had requested the Authority to arrange for the operation. During 1923, 98 cases of enlarged tonsils, 13 of adenoids, and 95 of enlarged tonsils and adenoids (total 206) were recommended for treatment. In 134 cases the Authority was

requested to arrange for the operation. The parents were given the option of having the operation performed as in-patients at the Queen's Park Hospital, in accordance with the scheme described in last year's report, or as out-patients at the Royal Infirmary. Forty-six of the 205 who desired treatment chose the Queen's Park Hospital and 159 the Royal Infirmary. Normally the children remain in the Queen's Park Hospital for 48 hours after the operation, and in the Royal Infirmary for three or four hours after the operation. Those leaving the Royal Infirmary are taken home in a taxi-cab, or, if the parents cannot afford this, in the Corporation ambulance. Owing to various circumstances it was only possible to arrange for seven operating days at the Royal Infirmary and for five at the Queen's Park Hospital. Sixteen children failed to attend for examination prior to the operation, six were found to have improved to such an extent that operation was not considered necessary, and three were unfit to be operated upon because of acute catarrh or debilitated condition. Sixty-five children were operated upon at the Royal Infirmary. All were able to proceed home on the afternoon of the operation except one child, who was detained for two days. Thirty-three of these children were conveyed home in the ambulance a few hours after the operation. Twenty-nine children were operated upon at the Queen's Park Hospital. All were discharged after two days except one girl, who developed pneumonia and was not fit for discharge for 19 days. Five children who were on the Royal Infirmary waiting list obtained out-patient recommends, and were dealt with as ordinary outpatients. At the end of the year 65 children were awaiting operation at the Royal Infirmary and 16 at the Queen's Park Hospital. They have all been dealt with at the time of writing (February, 1924). Appointments are made for the children to be examined fourteen days after the operation, and to have a course of breathing exercises at the Remedial Exercises Clinic. It is to be regretted that only 62 children out of the 94 operated upon presented themselves for the exercises, which are a very necessary completion of the cure.

The following Table shows that altogether 109 cases received operative treatment, and in 26 the condition was relieved by non-operative measures :—

TABLE IV.

GROUP III.—TREATMENT OF DEFECTS OF NOSE AND THROAT.

NUMBER OF DEFECTS.			Received other forms of treatment	Total Number treated
Received Operative Treatment		Total		
Under the Authority's Scheme, in Clinic or Hospital	By Private Practitioner or Hospital, apart from the Authority's Scheme	Total		
94	15	109	26	135

SCHOOL DENTAL DEPARTMENT. With the exception of four sessions devoted to dental work under the Tuberculosis, and six under the Maternity and Child Welfare Scheme, the Dentist spent all her time examining and treating school children. The information required by the Board of Education is given in the following Table :—

TABLE IV. TREATMENT OF DENTAL DEFECTS.

GROUP IV.—DENTAL DEFECTS.

1923 1922

(1) Number of children who were :—

(a) Inspected by the Dentist :

Age :

5	708	Total	7732 7111
6	.....	936	
7	.....	1193	
8	.....	1551	
9	.....	1611	
10	.....	1733	
11	.....	—	
12	.....	—	
13	.....	—	
14	.....	—	
Specials	961		482
Grand Total		8693		7593

	1923	1922
(b) Found to require treatment	6061	4308
(c) Actually treated	3138	1891
(d) Re-treated during the year as the result of periodical examination	432	435
(2) Half-days devoted to Inspection	124	105
Half-days devoted to Treatment	291	311
	—	—
Total	415	416
	—	—
(3) Attendances made by children for treatment ..	3886	2801
(4) Fillings : Permanent Teeth	1072	1584
Temporary Teeth	48	17
	—	—
Total	1120	1601
	—	—
(5) Extractions : Permanent Teeth	333	270
Temporary Teeth	3406	2516
	—	—
Total	3739	2786
	—	—
(6) Administrations of general anæsthetics for extractions	9	—
(7) Administrations of local anæsthetics	2509	1579
(8) Other operations	261	167

Appointments to attend the Clinic for treatment were made to the number of 3,685. Two thousand nine hundred and twenty-five, or 80%, were kept, compared with 70.9% in 1922 and 67.8% in 1921. The number of mouths made healthy was 1,766. The primary object of the scheme is to prevent serious dental caries by examining the mouths of children aged five years and offering treatment to those requiring it. The Dentist re-examines each year all those subjected to routine examination in the preceding year, and thus the scope of the work is ever widening and the limit of the dental work which can be done by one dentist is now being approached. In 1923 those aged 6, 7, 8, 9, and 10 years were re-examined. Nine hundred and sixty-one "casual" cases were treated compared with 482 in 1922. These are children sent by school teachers or others because of toothache, and include children whose parents had refused treatment when it had been offered after routine inspection.

Table 9.

STATISTICS RELATING TO INSPECTION BY THE DENTIST.

NUMBER EXAMINED.

Sex.	Year of Birth.	Number examined.	All teeth sound.	% all teeth sound.	More than five temporary teeth decayed.	% more than five temporary teeth decayed.	% no permanent teeth	% with permanent teeth sound.	No. with carious permanent teeth.	% with carious permanent teeth.
B	1918	360	45	12.50	232	61.60	97.50	6.10	3	0.82
G.	1918	348	49	14.08	197	56.60	87.64	11.76	3	0.86
B.	1917	495	26	5.25	382	77.17	50.90	39.39	47	9.49
G.	1917	441	28	6.34	345	78.23	43.76	47.84	50	11.36
B.	1916	578	19	3.28	461	79.75	9.67	61.41	167	28.89
G.	1916	615	39	6.34	483	78.55	7.96	59.35	218	35.44
B.	1915	727	12	1.65	570	78.40	0.96	51.99	332	45.66
G.	1915	824	13	1.57	626	75.99	0.45	45.29	439	53.39
B.	1914	771	22	2.85	513	66.53	0.12	41.89	448	58.10
G.	1914	840	8	0.95	553	65.83	—	41.42	610	72.61
B.	1913	855	15	1.75	461	53.91	0.11	37.54	536	62.69
G	1913	878	19	2.16	460	52.39	—	33.14	587	66.85
Boys		3786	139	3.67	2619	69.17	17.64	13.93	1533	40.49
Girls		3946	156	3.95	2664	67.51	42.10	41.28	1907	48.32
Tot		7732	295	3.81	5283	68.32	29.25	28.18	3440	44.48

These figures show that the percentages with all teeth sound are smaller even than last year. Of 840 girls, aged nine years, only 8 had every tooth sound.

	1923.	1922.
Total number of Children inspected	7732	7111
No. with dental caries	7438 or 96.1%	6573 or 92.4%
,, advised to have treatment	5100 or 65.7%	3846 or 54.3%
,, not requiring immediate treatment	2338 or 31.4%	3265 or 45.9%
,, of parents present at inspection	242 or 3.1%	245 or 3.4%
,, of consents for treatment at clinic	2238 or 43.9%	1995 or 51.9%
,, who prefer private treatment	310 or 6.08%	420 or 10.9%
,, who refused treatment	1585 or 31.01%	802 or 20.9%
,, of others, no definite decision	967 or 18.9%	729 or 16.3%

The next Table gives further information with regard to Dental Treatment.

Table 10.

DENTAL TREATMENT, 1923.

Number of Children.	PERMANENT TEETH.			TEMPORARY TEETH.		Anaesth- etics.		Other Opera- tions.	
	Filled.			Extracted.	Filled.	Local	Gen.		
	Extracted.	Cement.	Amalgam.						
Inspected cases ... 1285	104	111	958	2692	48	1566	9	96	
Casual cases 961	229	10	60	714	1	943	...	165	

It is interesting to note that 362 children who were treated at the Dental Clinic in 1922 were, on re-inspection in 1923, found to have sound teeth, while 910 of those treated last year were found on re-examination to need further treatment. Over a thousand children referred for treatment in 1922 were found in the same or a worse condition in 1923, nothing having been done in the meantime. All these cases had either refused treatment by the Authority's Dentist or had not kept an appointment which had been made.

The foregoing figures show the extreme seriousness of the problem of dental disease, for if we believe genuinely, as do the most eminent authorities, that an unhealthy mouth is the gateway through which many diseases gain access to the body, we must feel very grave concern at the extent of dental caries and at the apathy with which it is regarded by parents and children alike.

Unfortunate features are :—

- (1) The decline in the already small number of parents who attend the school when the Dentist examines their children's teeth.
- (2) The decline in the number who accept treatment at the Clinic from 52% to 44%, and

(3) The great increase from 21% to 31% of those who refuse definitely to provide treatment, and the increase from 16% to 19% of those who do not trouble to answer the letter which points out that the child urgently requires dental treatment.

During the year addresses to parents on the importance of sound teeth were given by Town Councillors, by a lecturer sent by a firm of manufacturers of tooth-paste, and by members of the school medical staff, but the practical results have been most disappointing. It is to be deplored that parents hold doctors and dentists before their children, when they are naughty, as bogie men who will be summoned to inflict painful treatment if they do not amend their ways. The result is that some children are terrified of a doctor or dentist, and they will not attend a dental clinic unless impelled by raging toothache. Many parents leave to the children the decision as to whether or not they will attend the clinic. It is noteworthy that the children who come to the clinic unaccompanied by their parents are as a rule less frightened than those whose parents come with them. The child who has not been prepared beforehand with threats of the dentist will, in the great majority of cases, undergo treatment without flinching, and will admit that there was practically no pain. The skilful use of local anaesthetics has indeed provided "dentistry without tears."

REMEDIAL EXERCISES CLINIC. This Clinic continues to do good work. Miss Holmes is now assisted by Miss Smalley. There were 113 sessions for breathing exercise cases, and 78 cases were dealt with. Seventy-two sessions were held for the treatment of deformities. The children are selected and the exercises prescribed by the Assistant School Medical Officer and he examines them at not less than three monthly intervals. An arrangement has now been made by which difficult cases can be seen by Dr. Briggs, who is acting as Surgeon for Orthopaedic cases. The following are details of the attendances:—

	1923	1922	1921
Breathing Exercises	556	296	263
Deformities	217	428	93
<hr/>	<hr/>	<hr/>	<hr/>
Total	773	724	356

TABLE II.

DEFECT.	No. on Books from 1922	New 1923 Cases	Cured	No. Left Improved	No. Left Unimproved	Still on Books	Attendances
Mouth Breathers	3	75	33	...	26	19	556
DEFORMITIES :—							
Scoliosis	2	4	1	...	2	3	97
Kyphosis	1	4	1	1	...	3	35
Pigeon Chest & Kyphosis	...	1	...	...	...	1	50
Scoliosis and Kyphosis	1	...	1	...	...	...	21
Kyphosis & Flat Feet ...	1	...	1	...	...	...	14
Total	8	84	37	1	28	26	773

There is much good work awaiting the proper development of this Clinic, especially in connection with the care of more serious cripples, than have hitherto been dealt with, but owing to financial considerations this has had to be deferred.

PHYSICAL TRAINING. In compliance with a request by the Board of Education the following report by Miss Holmes, Organiser of Physical Training, is included here :—

“ During the year 1923 the physical training of the pupils in attendance at the public elementary schools made gradual but steady progress. In most schools the children received four lessons per week—three lessons each of twenty minutes’ duration and one period of forty minutes for organised games. The Harrison Gymnasium was used as a special centre for one group of schools.

During the winter session the Organiser of Physical Training held evening classes in physical exercises and dancing for women teachers. These were well attended. Meetings of the Teachers’ Organised Games Club were held weekly, and several matches were played during the year.

The Education Committee increased the number of playing fields for elementary schools, and scholars in attendance at seventeen senior departments had the opportunity of taking part in organised games under good conditions.

During the summer months large numbers of the older children received instruction in swimming and life-saving at the public baths.”

BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

Table III. gives particulars of the blind, the deaf, the crippled, the tuberculous, and the mentally defective:—

TABLE III.

**NUMERICAL RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA
IN 1923.**

			Boys.	Girls.	Total.
BLIND.					
(including partially blind), within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893.		Attending Public Elementary Schools ...	8	8	16
		Attending Certified Schools for the Blind	5	2	7
		Not at School	2	...	2
DEAF AND DUMB.					
(including partially deaf) within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893.		Attending Public Elementary Schools	1	0	1
		Attending Certified Schools for the Deaf	5	5	10
		Not at School	1	1	2
MENTALLY DEFICIENT.					
Feeble-minded		Attending Public Elementary Schools	3	4	7
		Attending Certified Schools for Mentally Defective Children.	38	20	58
		Notified to the Local Control Authority by Local Education Authority during the year	4	2	6
		Not at School	1	3	4
Imbeciles		In Institutions	3	1	4
		At School .....	...	...	...
		Not at School	3	1	4
Idiots			4	...	4
EPILEPTICS.					
		Attending Public Elementary Schools	2	...	2
		Attending Day Open-Air Class	1	...	1
		Attending Certified Schools for Epileptics .....	...	...	...
		In Institutions other than Certified Schs.	...	...	...
		Not at School	3	2	5

TABLE III.—Continued.

			Boys	Girls	Total
PHYSICALLY DEFECTIVE.	Pulmonary Tuberculosis	Attending Public Elementary Schools	14	8	22
		Attending Day Open-Air Classes	5	3	8
		In Residential Open-Air School	6	6	12
		Attending Certified Schs. for Physically Defective Children.	...	..	...
		In Institutions other than Certified Schs.	...	4	4
		Not at School	4	4	8
	Crippling due to Tuberculosis	Attending Public Elementary Schools	6	6	12
		Attending Day Open-Air Classes	1	1	2
		Attending Residential Open-Air School ...	...	1	1
		Attending Certified Schs. for Physically Defective Children.	...	...	...
		In Institutions other than Certified Schs.	13	6	19
		Not at School	7	2	9
Physical- ly Defective	Crippling due to causes other than Tuberculosis, <i>i.e.</i> , Paralysis, Rickets, and Traumatism.	Attending Public Elementary Schools	21	20	41
		Attending Certified Schs. for Physically Defective Children.	...	...	...
		In Institutions other than Certified Schs.	8	2	10
		Not at School	19	11	30
	Other Physical Defectives <i>e.g.</i> , (a) delicate and other Children suitable for admission to Open-Air Schools.	Attending Public Elementary Schools	1	4	5
		*Att'ding Day Open-Air Classes	46	57	103
		+In Resid'tial Open-Air School	* 7	...	7
		Attending Certified Schs. for Physically Defect. Child. other than Open-Air Schs.	...	...	...
		Not at School .....	...	...	...
	(b) Children suffering from severe heart disease	At School	20	18	38
		Not at School	5	3	8

* Excluding 13 other children in Day Open-Air Classes who are included in other parts of this Table.

+ Excluding 13 other children in Residential Open-Air School who are included in other parts of this Table

The following Table compares the number of Blackburn children requiring special education or treatment because of mental or physical defect with those in England and Wales as a whole :—

ASCERTAINED EXCEPTIONAL CHILDREN OF SCHOOL AGE AS A PERCENTAGE OF THE AVERAGE ATTENDANCE IN THE PUBLIC ELEMENTARY SCHOOLS.

	Blind includ- ing partially blind	Deaf includ- ing partially deaf	Feeble- minded	Im- beciles	Idiots
Eng. & Wales (1922)	0.1 ...	0.1 ...	0.5 ...	0.09 ...	0.01
Blackburn (1923)	0.1 ...	0.07 ...	0.4 ...	0.04 ...	0.02
	Epileptics	Tubercular (lungs)	Cripples (tubercular)	Cripples (other than tubercular)	
Eng. & Wales (1922)	0.1 ...	0.4 ...	0.2 ...	0.4	
Blackburn (1923)	0.04 ...	0.29 ...	0.3 ...	0.4	
	Other Physical Defectives	Total			
Eng. & Wales (1922)	0.8 ...	2.8			
Blackburn (1923)	0.6 ...	2.4			

BLIND CHILDREN. The 16 children attending public elementary schools who are mentioned in the Table are partially blind. Most of them are suffering from high myopia and special provision should be made for their education. Three blind children are being educated at the Catholic Schools for the Blind, Liverpool, and four at the Homes for the Blind, Fulwood, Preston. The two blind children who are not at school are awaiting vacancies.

Arrangements have now been made for children who leave Schools for the Blind on attaining the age of 16 years to be trained in a suitable occupation, such as basket-making, brush-making, knitting, or cane-chair seating. The training is provided at the Blackburn Workshops for the Blind, Thornber Street and Whalley Range. The latter, which is the women's department, is housed in premises owned by the Education Authority.

The Chairman of the School Attendance Reference and the School Medical Officer visit the blind children in the Special Schools at least once a year and arrange for them to have vocational training, in occupations for which they have an aptitude, during the last two years of their education there.

DEAF CHILDREN. Nine deaf and dumb children are being educated at the Royal Cross School for the Deaf, Preston, and

one in the Yorkshire Institution for the Deaf, Doncaster. Two are awaiting vacancies.

During the past thirteen years 21 deaf and dumb scholars have left the Special Schools on attaining the age of 16 years. Enquiry has been made as to their present condition: all but one were traced and were found to be self-supporting. Some also assist in the support of parents. Two are married but continue their occupations as winders. Two of the eight men are employed as labourers, two as weavers, and one each at the occupations of drawer-in, cabinet-maker, clerk, and tailor. Eight of the twelve women are winders and one is engaged in each of the occupations of heald-knitter, machinist, dressmaker, and carpet-binder. It is remarkable that even after such prolonged industrial depression every one was fully employed. All could lip read except one girl, who had to use the manual alphabet. The difficulties in teaching the deaf and dumb to speak are so great that it is not surprising that results, so far as ability to speak are concerned, are not so satisfactory. Three men and three women speak well, two men and two women can make themselves understood, but three men and seven women cannot speak at all and are entirely dependent on the manual alphabet for communicating with others.

MENTALLY DEFECTIVE CHILDREN. The number of these children in ordinary elementary schools has been reduced from 18 last year to 7. There are 35 boys and 20 girls attending the Regent Street Special School. Four boys and a girl were admitted during the year, and seven boys and two girls discharged. One of the boys was transferred to an ordinary elementary school, one removed out of the district, one entered the Wilshire Orphanage, one a Roman Catholic Home, and two, who were brought before the Magistrates for pilfering, were sent, one to the Stoke Park Special Industrial School, Bristol, and the other to the Wellesley Nautical School, Blyth. One left on reaching the age of 16 years and is employed in a marine store. The two girls left at the age of 16 and have obtained work—one in a mill, the other in a packing warehouse.

All the 55 scholars at present in the school are making satisfactory progress. The substantial meal in the middle of the day is responsible for some of this improvement. At an exhibition of work held recently some very fine specimens of hand work were shown. Never in the history of the school has the swimming been so good. Twenty-two swimming certificates, grading from

breadth to half-mile, have been gained, and one life-saving certificate. Warm baths are given in school to both boys and girls weekly. Every attention is paid to defective vision, hearing, speech, and minor defects.

The following return required by the Board of Education has been prepared by Miss Clayton, the Headmistress of the School, who keeps in close touch with all her former pupils. It gives the present condition of the 159 children discharged from the school since 1910.

Table 12.

ANNUAL RETURN OF THE AFTER-CAREERS OF CHILDREN FORMERLY ATTENDING SPECIAL SCHOOLS.

	<i>Regent Street Special School.</i>	
	<i>Boys.</i>	<i>Girls.</i>
1. No. of Children who have left the School since 1910	110	49
2. No. who—		
(a) Have since died	10	2
(b) Are known to be incapable by reason of mental defect of undertaking employment	4	3
(c) In attendance at an Institution for further education	6	3
(d) Are in other Institutions	5	—
3. No. employed in—		
(a) Industrial or manual occupations	64	24
(b) Agricultural or rural occupations	3	—
(c) Domestic occupations (including those who are helping in domestic work at home)	2	9
(d) Commercial, professional, or clerical work	2	—
(e) "Blind Alley" or precarious occupations	5	—
4. No. who have left the neighbourhood or whose after-careers have not been traced	9	8

There are three feeble-minded Blackburn children in Residential Certified Special Schools. The four feeble-minded who are not at

school suffer from a physical disability and are unable to travel to Regent Street every day. The six feeble-minded children notified to the Lancashire Asylums Board include two who left the Regent Street Special School in December, 1922, three who left during 1923, and one child who was an inmate of the Queen's Park Hospital.

EPILEPTICS. Eight children who suffer from epileptic fits are known to the School Medical Officer. In three the fits are infrequent and they are able to attend school. Five, however, have such severe and frequent attacks that they cannot attend any ordinary school. One was admitted in January, 1924, to the Maghull Colony for Epileptics.

PULMONARY TUBERCULOSIS. The number of cases which have been definitely diagnosed and notified, either by private practitioners, the Tuberculosis Officer, or the Assistant School Medical Officers, is 54. In 42 of these the disease is quiescent, and, being non-infectious, they are attending public elementary schools or open-air schools. Four girls are inmates of Queen's Park Hospital and eight children are not at school. All these cases are seen periodically, either by the Tuberculosis Officer or by an Assistant School Medical Officer.

CRIPPLING. Tuberculous cripples number 43, of whom 18 are attending a public elementary or an open-air school. Eighteen are in Queen's Park Sanatorium, 7 are at home and are receiving no education. The parts affected are:—

Hip	21
Spine	10
Knee	10
Elbow	2
<hr/>	
Total	43

Non-tuberculous cripples number 81, and their condition varies in severity from the more trifling defects, such as slight knock-knee or a minor degree of spinal curvature, to the complete crippling due to paralysis of two or more limbs. As regards the causation of these physical defects anterior poliomyelitis, known commonly as infantile paralysis or "tooth-stroke," takes the first place, and, as far as Blackburn is concerned, is the cause of more severe crippling even than tuberculosis of the bones and joints. Undoubtedly a considerable proportion of such crippling is preventible in the early stages of the disease by proper medical treatment.

The next most common cause of crippling is rickets, a disease of early childhood, caused by a wrong dietary (deficient in milk and animal fats) and by lack of fresh air and sunshine. Its usual manifestations are bow legs and knock-knees, and, in the case of girls, deformity of the pelvis, which may cause serious results in adult life when they are about to become mothers. Several cases were due to congenital defects, such as club-feet or dislocation of the hip; three to paralysis following injury to the brain at birth, and two to street accidents.

SUMMARY OF THE CAUSATION OF NON-TUBERCULOUS CRIPPLING.

Infantile Paralysis	41
Rickets	24
Congenital Deformities	11
Birth Paralysis	3
Accidents	2
—	
Total	81

The scheme, described in last year's report, for the prevention and treatment of crippling by the appointment of Dr. Briggs to see surgical cases for the Authority, and by co-operation with the Guardians and the Crippled Children's Aid Society, has now been in operation for a year. There have been 10 sessions at the Municipal Dispensary: 75 patients have attended, 26 under five years of age; 39 from five to sixteen years, and 10 over sixteen years. The importance of treating cripples as early as possible, and certainly before they attain the age of 5 years, needs no emphasis. The following shows the conditions from which the patients suffered:—

Infantile Paralysis	13	Ricketty Deformities :	
<i>Tuberculous Conditions :</i>			
Spine	5	Bow Legs	11
Glands	5	Knock-knees	5
Knee	3	Others	5
Hip	3	—	21
Skin	3	Congenital Dislocation.	6
Foot	2	Club Feet	5
Ribs	1	Results of Accidents	2
Elbow	1	Severe Flat Foot	1
Wrist	1	Others	2
Brain	1	—	
—		75	

Several attended on more than one occasion. The total attendances numbered 113.

Twenty-four X-ray photographs were taken at the Corporation Hospital in connection with the work of this Clinic.

In 25 cases an operation was advised, and in 16 splints were ordered. The Doctor's reports were forwarded to the Crippled Children's Aid Society, and that Society arranged, in accordance with the recommendation, for the splints to be obtained and for admission to the Queen's Park Hospital for operation. The children can remain at this Hospital under ideal open-air conditions for as many months as the Doctor thinks advisable. On discharge the School Medical Officer is notified, and the children are visited at home by a School Nurse who arranges for further attendance at the Clinic. The scheme has already borne much good fruit, and the transformation effected in some of the cripples is little short of marvellous.

At the end of the year there were 33 cripples in the Queen's Park Hospital, 23 of whom were tuberculous. Arrangements are made by the Guardians for the children to have lessons for a few hours each week while they are in the hospital. There are, however, 42 cripples at home. In the absence of a Special Day School for the Physically Defective 42 are not receiving any education whatsoever. Their physical condition is a very heavy handicap. Cripples are notoriously alert mentally, and some of our ablest administrators and men of letters have been crippled in early life by infantile paralysis. Cripples are easily taught and are often very skilful at handwork. They are indeed worthy of a special education so that they may, as far as possible, overcome their physical disability and become self-supporting members of the community.

OPEN-AIR SCHOOLS. It was mentioned in last year's report that an additional open-air class had been instituted at the Corporation Park. It is gratifying to be able to report the opening of yet another class in May, 1923, namely at the Corporation Hospital. This step was made possible by the fortunate circumstance of the slight incidence of scarlet fever in Blackburn during 1923 which lead to the disuse of one of the scarlet fever pavilions at the Hospital. The pavilion, which is in an isolated part of the Hospital grounds and has a playing field adjoining, was disinfected thoroughly and made available for 20 residential and 20 day scholars. We are thus able to educate 40 children in the open

air at a negligible cost for structural alterations. The Education Committee pay for the two teachers and the whole cost of education. They also pay for the dinners given to the day scholars, who, however, contribute 4d. a day. The Health Committee pay for the maintenance of the residents and recover sums varying from 3s. to 7s. a week per child from the parents.

As regards open-air classes generally, we have pursued the policy, which has worked well in previous years, of filling up the classes with children who suffer from various forms of slight or severe disease of the respiratory organs, together with a large group who show signs of tuberculous glands, anaemia, debility, or malnutrition. Just as open-air treatment is one of the most effective therapeutic agents for the amelioration of the symptoms of all forms of consumption, so it is equally effective in the prevention of serious non-tuberculous respiratory diseases. Except for the influence of the open-air schools many of these children would develop tuberculosis in later life. It is certain, therefore, that the part played by these schools in the prevention of disease is very considerable. The main difficulty, however, is lack of accommodation in certain areas. Weak and sickly children cannot walk the long distances which attendance at the nearest open-air school may entail. For the Mill Hill district the nearest open-air school is at the Corporation Hospital, a distance of 1½ to 2 miles from the homes of the children. The difficulty of accommodation is, however, being gradually solved by the opening of additional classes each year.

At the end of the year the day open-air classes contained 116 children. The conditions for which they were admitted are:—

Pulmonary Tuberculosis (Quiescent)	6
Other Tuberculous Conditions (Glands, etc.) ...	37
Anæmia	14
Bronchitis and Asthma	16
Chorea	10
Infantile Paralysis	1
Malnutrition	7
Debility	12
Epilepsy	1
Heart Disease	6
Miscellaneous	6
<hr/>	
Total	116

The following Table gives information concerning admissions to and discharges from the classes :—

Table 13.

On Register 31st Dec., 1922	Admitted during 1923	Discharged during 1923	On Register 31st Dec., 1923	Average duration of Attendances of those Discharged	Average Increase in Weight of those Discharged
ACCRINGTON ROAD OPEN AIR CLASS.					
26	19	18	27	18 7 months	10.3 lbs.
BANGOR STREET OPEN AIR CLASS.					
25	20	19	26	8 months	6 lbs.
CORPORATION PARK OPEN AIR CLASSES (2).					
50	37	37	50	13.4 months	6.6 lbs.
CORPORATION HOSPITAL NON-RESIDENTIAL OPEN AIR CLASS.					
—	25	*12	13	5.1 months	5.8 lbs.
101	101	86	116		

²Of these 4 were transferred to the Residential Open Air School.

As would be expected, the gains of weight depend on the length of stay in the classes.

RESIDENTIAL OPEN-AIR SCHOOL, CORPORATION HOSPITAL.

This school was opened on the 1st May, 1923, under the circumstances described in last year's report. The time-table is as follows :—

Table 14.

RESIDENTIAL OPEN-AIR SCHOOL—CORPORATION HOSPITAL.

TIME-TABLE.

7 - 7.30	7.30 - 8	8 - 8.30	8.30 - 9.15	9.15 - 9.30	9.30 - 11.50	11.50 - 12	12 - 12.45
RISING and DRESSING	BREAKFAST	REST	FREE PLAY	LUNCH	SCHOOL	PREPARATION FOR DINNER	DINNER
Temperatures taken.	Porridge and Milk, Cocoa, Bread and Butter			Hot Milk or Fruit.		Meat, Fish, Rabbit Pie, Stewed Steak and Onions, Chops, Sausage & Potatoes, Shepherd's Pie	
					Vegetables:—Peas, Beans, Carrots, Turnips, Cabbage, Puddings.—Rice, Sago, Jam Tart, Prunes, Custard.		
12.45 - 1.30	1.30 - 3.30	3.30 - 4	4 - 4.30	4.30 - 5.30	5.30 - 7	7 - 7.30	7.30 - 8
REST	SCHOOL	TEMPERATURES TAKEN, then FREE PLAY	TEA	REST	FREE PLAY	SUPPER	AL. IN BED BY 8 p.m.
			Cocoa, Bread and Butter, Jam or Eggs			Milk, Bread and Butter.	

The children are weighed and measured on Mondays and Wednesdays. Visiting days, Wednesdays and Sundays, 2—3 p.m.

It was proposed to retain the scholars as residents for about three months and then transfer them to a day open-air class. It has been found, however, that often a much longer period than this is necessary before the child has reached the limit of improvement. It was a condition of admission that the parents should allow the children to remain in the school for at least two months. Forty-two scholars, including four transferred from the day class, were admitted between May 1st and December 31st, and 22 were discharged, leaving 20 in the school at the end of the year.

The following Table shows the conditions for which the children were admitted :—

CORPORATION HOSPITAL RESIDENTIAL OPEN-AIR SCHOOL.

Pulmonary Tuberculosis	7
Other Tuberculous Cases, including Tuberculous Glands in Neck, Chest, and Abdomen...	16
Anæmia	2
Bronchitis and Asthma	7
Pneumonia Convalescents	3
Convalescent from Chorea	1
Malnutrition	4
General Debility	2
<hr/>	
Total	42

Occasionally children were discharged, despite the condition of admission, after a few weeks only. This was, as a rule, because the parents felt lonely without the children at home and alleged that the children were "fretting." As a matter of fact all the children were thoroughly happy and enjoyed the companionship of the others.

The next six Tables have been prepared by Dr. Lamont, who resides at the Corporation Hospital. The first gives information concerning admissions to and discharges from both the Residential School and the Day Classes, and enables comparisons to be made between them :—

	On Register 1st May 1923	Admitted since 1st May 1923	No. Discharged	On Register 31st Dec., 1923	Average duration of attendance of those discharged	Average increase of weight of those discharged
Residents	Nil.	42	22	20	16 weeks	6 lbs. 6 ozs
Day Scholars	Nil.	25	12	13	19·4 ,,	5 , , 8 ,,
Total	Nil.	67*	34*	33	18·7 ,,	6 , , 0 ,,

* Four day scholars were admitted subsequently as resident scholars. These are counted as discharges from the day school and admissions to the residential school.

The following Tables show the average gains in weight, height, and chest measurements of (1) all the scholars and (2) those who were in attendance for over two months. The gains for the residents in the first Table are not so large as they would be otherwise, because 10 new residents were admitted and four were transferred from the Day Class to the Residential School early in December.

ALL CHILDREN.

	Average gain in weight of those under treatment	Average gain in height of those under treatment	Average increase in chest measurement	Average period of treatment
Residents.....	8 lbs. 10 ozs.	0·96 ins.	0·8 ins.	22·3 weeks
Day Scholars...	5 , , 0 $\frac{1}{2}$, ,	0·68 , ,	0·5 , ,	21·5 , ,

CHILDREN UNDER TREATMENT FOR AT LEAST TWO MONTHS.

	Average gain in weight	Average gain in height	Average gain in chest measurement	Average period of treatment
Residents.....	9 lbs. 11 ozs.	1·05 ins.	0·91 ins.	26·7 weeks
Day Scholars...	5 , , 13 , ,	0·75 , ,	0·58 , ,	24·5 , ,

The haemoglobin content of the blood of each of the scholars was examined on admission and just before discharge. Many showed on admission a deficiency of haemoglobin to an extent of 20% or even 25%. In 65% of the scholars the haemoglobin content of the blood increased by over 10% during their stay in the school.

The previous medical history of the children is as under:—

TABLE GIVING THE PERCENTAGES OF THE CHILDREN IN THE HOSPITAL OPEN-AIR SCHOOL WHO HAVE PREVIOUSLY SUFFERED FROM THE FOLLOWING DISEASES.

	Whooping Cough.	Pneumonia.	Swollen Glands.	Bronchitis.	Measles	Scarlet Fever.	Influenza.
Residents	40%	24%	33%	45%	60%	20%	25%
Day Scholars ...	48%	5%	20%	56%	68%	24%	—

The next Table shows that the great majority of the children showed by the tuberculin reaction (Von Pirquet or Moro) that they were infected with tuberculosis. It also shows the percentages with enlarged glands.

	Enlarged cervical glands.	Enlarged bronchial and mediastinal glands.	Positive Von Pirquet reaction.	Positive reaction to Moro's diagnostic test.	Reaction to one or other of the tuberculin tests.
Residents ...	67	39	70	60	77
Day Scholars	40	48	68	74	79

	% showing definite tuberculosis in one parent	% showing definite tuberculosis in brother, sister, or other relative	% showing definite tuberculosis in any member of a family
Resident	16	26	36
Day Scholars ...	15	5	20

The following points are of special interest :—

1. The children who were resident in the Hospital Open-Air School showed a much greater improvement in weight, height, and chest measurement than those children who attended as day scholars. In the case of the day scholars no doubt the home conditions, and especially the sleeping accommodation in the homes, helped to undo to some extent the benefit derived from the open-air which they enjoyed during the day.

2. The children, both resident and day scholars, showed a considerable improvement in nutrition. This improvement was especially marked in the resident scholars.

One resident and two day scholars showed no improvement in general nutrition. These three children showed severe reactions to tuberculin tests.

3. A larger proportion of resident children had enlarged glands in the neck. This is explained by the fact that the children admitted as resident scholars had more severe and more definite lesions than those attending as day scholars.

4. There were eight children suffering from definite tuberculosis of the lungs, but none of these children was a "sputum-positive" case., *i.e.*, none of them showed the presence of the bacillus of tuberculosis in the expectoration.

The main object of this work is to build up the resistance of children infected with, or liable to infection with, tuberculosis to such an extent that they will not develop active tuberculosis in adult life. All children discharged from the residential school will be followed up at regular intervals for many years in order to determine whether or not our hope is justified. The immediate results are certainly very satisfactory.

SEVERE HEART DISEASE. There are eight children who have heart disease so seriously that they cannot attend school. If a special school for the physically defective were provided they might be conveyed there in a 'bus, but such cases are always unsatisfactory from both a medical and an educational standpoint. The only satisfactory method of attacking the problem of the

prevention of severe heart disease is to make parents realise that heart disease in children is generally the result of rheumatism, and that the only manifestation of a rheumatism which is damaging the heart may be "growing pains" in the legs. "Growing pains" are serious, and the proper place for children so affected is "bed until they are cured." Other rheumatic diseases of children are chorea (St. Vitus' Dance) and some forms of tonsillitis.

PROVISION OF MEALS.

There was no alteration during 1923 in either the dietary or the administrative arrangements.

The total number of necessitous cases requiring to be fed during the year was only 63, and most of these were only on the books for a portion of the year. This number compares with 51 in 1922, 392 in 1921, and 52 in 1920. The number of meals supplied to the necessitous was 4,731. The number of meals supplied, for payment, at the Special and Central Schools was 12,757.

CO-OPERATION OF TEACHERS.

It is a pleasure to record again the hearty co-operation of the teachers in our work. The officers of the School Medical Service endeavour to cause as little inconvenience as possible to the ordinary work of the school, and trust that their endeavours to improve the physique of the children are assisting materially the educational work by rendering the children more receptive of the teaching provided.

INSPECTION CLINICS.

There have been 101 inspection clinics. The average attendance at this clinic during the year was 14, compared with 15 in 1922. The number of children who attended was 1,004 compared

with 1,105. The total attendances were 1,465 compared with 1,806. The children were referred to the clinic by :—

	1923	1922
School Attendance Officers	311	388
School Nurses	451	287
Teachers	216	391
Medical Inspector for further examination	15	35
Parents	11	4
 Total	 1004	 1105

Inspection clinics were held on Tuesday and Friday afternoons and Saturday mornings until August 31st, when the Friday afternoon clinic was discontinued.

CO-OPERATION WITH VOLUNTARY BODIES.

During 1923 the After-Care Sub-Committee of the Juvenile Employment Committee followed up at home 71 children who had left school with untreated physical defects. The following report upon them has been received from Mr. Lister, the Juvenile Employment Officer :—

Received medical attention since leaving school ...	12
Promised attention	15
Parents say defects improved and no attention required	18
Children with glasses, but not wearing them	6
No attention received: further after-care required	20

Co-operation with the Crippled Children's Aid Society and the National Society for the Prevention of Cruelty to Children is maintained; the two Societies work in conjunction with regard to the scheme for obtaining hospital treatment for cripples which has been previously described.

Five cases of neglect and one of ill-treatment were reported to the National Society's Inspector. All were visited by him and warned, and in every case an improvement was effected without resort to Police Court proceedings. A case of serious dental caries where the parents refused treatment was reported, and after a visit from the Inspector the child attended the clinic for the necessary treatment. Fourteen other cases of neglect to obtain medical treatment, apart from the 98 spectacle cases mentioned on page 36, were referred to the Society. Several were cases of deformity. The Inspector brought them to the Orthopædic Clinic. Operations were advised and have since been performed successfully in every case. In all 14 cases medical treatment was obtained as a result of the Society's assistance.

EMPLOYMENT OF CHILDREN AND YOUNG PERSONS.

This work is carried out in close co-operation with the Juvenile Employment Officer. During 1923 the juvenile employment cards of 1,216 children were completed by the Medical Inspector at the examinations held a few months before they left school. This compares with 714 in 1922.

The classification used is as under :—

1. Fit for any employment.
2. Defective vision, including diseases of the eye-ball.
3. Defective hearing, including middle ear disease.
4. Recurrent naso-pharangeal catarrh.
5. Disease of the lungs, including asthma.
6. Heart disease.
7. Muscular weakness or poor development.
8. Malnutrition, including anaemia.
9. Deformities, including feeble-minded.
10. Complications : two or more of the above.

The Juvenile Employment Officer, from the code number placed upon the school record, has a working knowledge of what occupation will be suitable and what unsuitable for the child concerned. In case of doubt as to whether or not any particular occupation would be unsuitable for a child in Groups 2 to 10

reference is made to the School Medical Officer. The following Table shows the results of the examinations:—

Code No.	1	2	3	4	5	6	7	8	9	10	Total
Boys	459	91	1	2	1	7	16	7	13	7	604
Girls	448	115	3	3	7	11	9	7	5	4	612
Total	907	206	4	5	8	18	25	14	18	11	1216

During 1923, 12 special cases were referred to the School Medical Officer by the Juvenile Employment Officer as it appeared that the occupation desired by the child or its parents would be unsuitable. In two cases medical examination confirmed this opinion and a more suitable opening was chosen.

The number of children licensed for employment out of school hours at the end of the year was 312, consisting of 294 boys and 18 girls. This is an increase during the year of 106 boys and 8 girls. One hundred and thirty-five boys and 6 girls were licensed to shopkeepers for the delivery of goods; 17 boys and 5 girls were employed on the market, 31 boys and 7 girls in the delivery of milk, and 111 boys in the delivery of newspapers. They were licensed for two hours' work each school day and five hours on Saturday. Those who delivered milk were also allowed to work for two hours on Sundays. The two hours' work on school days were from 7 to 8 a.m. and 5 to 6 p.m., or from 5 to 7 p.m. One hundred and sixty-six boys and ten girls who had applied for registration for employment out of school hours were examined by an Assistant School Medical Officer, and all except two were recommended for the necessary certificates.

All children employed out of school are examined periodically in school by the Assistant School Medical Officers in order to ascertain whether or not the employment is prejudicial to health: in no instance was this found to be the case.

Twelve girls residing and licensed in other towns were granted permission to take part in entertainments within the town for a period of one week. Four girls whose medical certificates had expired were re-examined and the certificates renewed. All were found to be in good health, and their lodgings, which were

inspected by an officer of the Medical Officer of Health's Department, were found to be satisfactory.

The father of a girl residing in Blackburn was granted a license for his daughter, aged 12, for six months to take part in entertainments both in Blackburn and in other towns. She was found to be physically fit, and the certificate was granted.

MISCELLANEOUS.

EXAMINATION OF SCHOLARSHIP WINNERS. Nine boys and 31 girls who had been awarded scholarships were examined.

EDUCATION ON HEALTH.

Considerable progress has been made in our efforts to interest children in the laws of health. A poster setting out the rules of health printed in last year's report is exhibited permanently in every school department. In one of the schools the children have designed posters to illustrate the rules. Some are very ingenious : one depicts a boy being thrown into the air by a goat and a pond is shown into which the boy will drop : it is labelled "Rise quickly and take a bath." Another shows the clock at 7 a.m. and a boy with a beaming face brushing his teeth while a towel indicates that he has thoroughly washed himself. Several show healthy children taking exercise and bear the motto, "Take exercise out of doors every day." Others show red-cheeked children eating vegetables and fruit.

A booklet entitled "Health Notes" has been printed and distributed to parents. It contains advice on sleep, teeth, suitable food for children, handkerchiefs, breathing through the nose, breathing exercise, eyes, verminous conditions, clothing, height and weight, habits and exercise.

The competitive spirit is well marked in children. They love to have marks awarded and to add them up day by day. A series of 23 health rules has been devised for which a mark or marks may be obtained. They are set out as in the following form, and parents are asked to give children who try to carry them out and who do not lose more than a certain number, a small reward each month.

BLACKBURN PUBLICITY COMMITTEE ON HEALTH.

THE CHILD'S RULES OF HEALTH.

Date.....	to.....	192	RECORD OF HEALTH MARKS.
			Marks S. M. Tu. W. Th. F. S.
1. Slept with windows open .....	.....	1	.....
2. Was in bed.....hours	.....	1	.....
6 to 8 years—12 hours.			
9 to 11 years—11 hours.			
Others —10 hours.			
3. Took cold bath or quick dry rub this morning .....	.....	1	.....
4. Had hot bath to-night (at least once a week)	2	.....	.....
5. Cleaned teeth before breakfast and after last meal .....	.....	1	.....
6. Cleaned finger-nails to-day	½	.....	.....
7. Washed hands before each meal	1	.....	.....
8. Had bowel movement to-day	1	.....	.....
9. Carried a handkerchief and used it to protect others if I coughed or sneezed	1	.....	.....
10. Put clothes to air at night	½	.....	.....
11. Tried to sit and stand straight all day	1	.....	.....
12. Did not put fingers or pencil in mouth	1	.....	.....
13. Washed hair (to be done as parent determines)	4	.....	.....
14. Cleaned nose before going to bed	1	.....	.....
15. Washed thoroughly before going to bed	2	.....	.....
16. Ate my food slowly	1	.....	.....
17. Drank a glass of water first thing this morning, last thing at night, and twice during the day between meals	1	.....	.....
18. Refrained from eating between meals	2	.....	.....
19. Took 1 hour's exercise out of doors to-day	2	.....	.....
20. Took movement exercises and deep breathing for 3 minutes this morning	2	.....	.....
21. Took one minute's deep breathing before getting into bed	1	.....	.....
22. Obeyed carefully all instructions of parent, doctor, or nurse with regard to my health or avoidance of bad habits..	3	.....	.....
23. I tried to avoid accidents to myself and others. I looked both ways before crossing the road	1	.....	.....
Total (excluding 4 and 13)....	26	.....	.....

I CERTIFY on my honour that I did everything marked X on the day indicated and the total number written on this record every week.

..... Signature of boy or girl.

..... Signature of parent.

..... Signature of teacher.

I BELIEVE that the child whose name is written above obtained the number of health marks indicated.

Teacher's Signature and mark of approval

WEIGHT RECORD (to be filled in by Teacher and shown to your parents).

Weight within a week of the first day of this record—

(on.... 192) was lbs.

Weight within a week of the last day of this record—

(on.... 192) was lbs.

The standard weight for height (.....inches) and ageyears) is.....lbs.

No. 22 applies to such matters as the wearing of spectacles, or prevention of habit spasms.

Both parents and children become very interested in it and the health habits in a short time become automatic.

Four series of addresses on mothercraft were given by the Health Visitors to the girls attending the Preston New Road and Mayson Street Housewifery Centres. Three addresses were given in each course. They were followed by a visit to a Child Welfare Centre.

DEATHS.

The deaths of 41 children of school age occurred during the year, this being the same number as in 1922: there were 52 in 1921. One of the 41 had never attended school owing to his physical condition. Included in the total are 13 deaths from tuberculosis, 4 from burns, scalds, and accidents, 3 from pneumonia, 3 from appendicitis, 2 from meningitis, 2 from heart disease, and 1 each from whooping cough, diphtheria, nephritis, diabetes, bronchitis, and peritonitis.

SECONDARY SCHOOLS.

The examinations at the High School and the Grammar School were confined in 1923 to the routine inspection of those born in 1908 and 1911, and of all the scholars who were newly admitted to the school.

The following table gives the results of the examinations :—

RETURN OF DEFECTS FOUND IN THE COURSE OF MEDICAL INSPECTION
IN SECONDARY SCHOOLS DURING 1923.

DEFECT OR DISEASE.	ROUTINE INSPECTIONS.			
	BOYS		GIRLS	
	No. referred for treatment	No. requiring to be kept under observation but not referred for treatment	No. referred for treatment	No. requiring to be kept under observation but not referred for treatment
Number Examined	232		151	
Malnutrition .....	...	...	...	1
<i>Uncleanliness :—</i>				
Head .....	...	...	5	...
Body .....	...	...	...	...
<i>Skin :—</i>				
Impetigo .....	...	...	...	...
Other Diseases (Non-Tubercular).	2	...	...	...
<i>Eye Diseases :—</i>				
Defective Vision	17	8	12	5
<i>Ear Diseases :—</i>				
Ear Disease	3	...	1	...
Defective Hearing .....	...	...	...	1
<i>Nose and Throat :—</i>				
Enlarged Tonsils	1	8	2	6
Adenoids .....	...	...	...	...
Enlarged Tonsils and Adenoids .....	...	...	1	...
Enlarged Cervical Glands (Non-Tubercular)	1	1	...	...
Defective Speech .....	...	...	...	...
Teeth—Dental Defects	4	...	6	...
<i>Heart and Circulation :—</i>				
Organic .....	...	...	...	1
Functional .....	...	1	...	6
Anæmia	1	...	...	5
<i>Lungs :—</i>				
Bronchitis	1	2	...	1
Other Non-Tubercular Diseases .....	...	...	...	...
Tuberculosis .....	...	1	...	...
<i>Nervous System :—</i>				
Epilepsy .....	...	...	...	...
Chorea .....	...	...	...	...
<i>Deformities :—</i>				
Rickets .....	...	1	...	...
Spinal Curvature	4	...	2	1
Other Defects or Diseases	1	...	...	...